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 AGRICULTURE  
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 PATENT SERIAL RECORDS

# AGRICULTURAL LIBRARIES INFORMATION NOTES

UNITED STATES MEAT ANIMAL RESEARCH CENTER

Pat Sheridan  
Librarian

The United States Meat Animal Research Center (USMARC), USDA, is located three miles west of Clay Center, Nebraska. Programs are conducted in cooperation with the Agricultural Experiment Station of the University of Nebraska and with other agricultural experiment stations of land-grant universities. The Center is developing new technology for use by the meat animal industries to increase the production of high-quality, red meat per unit of production resource use. Development of land and associated resources began in 1966. When completed, the 35,000-acre Research Center will provide resources for a comprehensive research program that will involve approximately 100 scientists and 300 support personnel.

Approximately one-half of the research is devoted to beef cattle, a quarter each to swine and to sheep.



*Crossbred cattle are part of a research project to identify which breed crosses gain most efficiently.*



*A Finn-cross ewe and her triplets cross a pasture at the U.S. Meat Animal Research Center in Clay Center, Nebraska.*

Full research operations will require breeding-age female populations of approximately 7,000 cattle, 7,000 sheep, and 500 swine litters per year.

Development has included the establishment of more than 30,000 acres of cool and warm-season pastures, 300 miles of fence and livestock water facilities for more than 200 pastures, over 5,000 acres for irrigated silage and hay production.

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experimental feedlots for cattle and sheep, and facilities for breeding herds and flocks.

Construction and development is in three phases:

- Phase I facilities provide a physical plant for intensive beef cattle and sheep investigations and for the swine research program.
- Phase II construction plans include an abattoir and meats research laboratory and livestock engineering facilities.
- Phase III will provide facilities for a comprehensive and integrated research program of producing, harvesting, handling, storing, and using forages.

## RESEARCH PROGRAM

The multidiscipline research program at USMARC is organized to provide new technology for the livestock industry.

Scientists are investigating major biological, physical, and managerial factors that influence production efficiency in all segments of the production cycle for beef cattle, sheep, and swine. The program includes investigations on genetics and breeding, nutrition, reproduction, life cycle management systems, animal housing and facilities, waste management, as well as producing, harvesting, handling, storing, processing, and using feeds. New knowledge from these investigations will assist the beef cattle, sheep, and swine industries in production, economic, and technological problems.

*Genetics and Breeding* research relates to optimum performance capability for different feed environments and production situations for cattle, intensive management systems for sheep with emphasis on reproduction rate and the production of heavy lamb carcasses with a desirable lean-to-fat ratio, and reproduction rate, feed efficiency, carcass composition, and meat quality for swine. Genetics and breeding research is fully integrated with research in the areas of reproduction, nutrition, carcass and meats, and management systems.

*Reproduction* research program is to develop the technology necessary for increasing the number of animals produced per reproducing animal.

Research on reproduction includes both sexes and involves the disciplines of physiology, endocrinology, neurology, biochemistry, nutrition, and genetics.

*Nutrition* research develops technology that can be implemented into production programs to increase the amount of high quality, edible meat per unit of available feed resource.

Research relating to improving feed efficiency involves the integration of genetics, biochemistry, nutrition, microbiology, and physiology and the variables related to appetite, maintenance, digestion, metabolic processes, tissue deposition, and to the physical and chemical treatment of feeds.

*Carcass and Meats* research develops technology to reduce the amount of fat per unit of edible product while maintaining or improving palatability of the edible product. An understanding of the factors that influence palatability of meat and the proportion of edible meat in the carcass is a primary aim of this research.

*Animal Waste Management* is concerned with identification of the nature and magnitude of the pollution problem associated with beef cattle, sheep, and swine production.

*Animal Physical Environment* research determines the importance of major factors related to the physical environment and to develop procedures for improving the environment to increase red meat production efficiency. The physical environment is an important factor for increasing meat animal production efficiency.

*Management Systems* research focuses on identifying and quantifying major factors affecting producing efficiency and returns to capital and management to provide for optimum use of resources in different production and economic situations.

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## LAND-GRANT AND CORPORATE AGRICULTURE MEETING

Doris B. Marshall  
Information Scientist  
Ralston Purina Company, St. Louis, Mo.

Academic, federal, and corporate librarians met in St. Louis, Mo., December 8-9, 1977 to discuss and exchange ideas on "Agricultural Information and the Market Place." The meeting, sponsored jointly by the National Agricultural Library, USDA, and Ralston Purina Company, was opened by Doris B. Marshall.

Reports were presented by Dr. Richard A. Farley, Director of the National Agricultural Library (NAL) on 1) the reorganization of the Department of Agriculture and the effect on NAL and its programs, 2) the ramifications of the Food and Agriculture Act of 1977, and 3) the activities on the international scene and NAL's participation in these activities, and by Connie McKenzie, Librarian, U.S. Environmental Protection Agency Region 7, Kansas City, on assistance that might be obtained from the EPA libraries. A "Guide to EPA Libraries," July 1977, is available from Doris B. Marshall or Connie McKenzie.

Methods of information gathering by the corporate world were described by James P. Lilly, Managing Editor of the *Prairie Farmer*, Jim Wiesemeyer, Manager of the Information Center, Doane Agricultural Service, Inc., and by William W. Allen, Executive Director of Information, Illinois Farm Bureau. Stress was placed upon the role of the "information person" in helping the user, the farmer, realize his information needs and providing him this information on a timely basis.

Discussions of automated systems included the automated system for environmental mapping at the Missouri Botanical Garden; Cropcast, which provides commercial information derived from meteorological satellite data; specialized systems in use at Chemagro; specialized custom-designed files used by staff of the U.S. Department of Agriculture; and an archival retrieval system in operation at John Deere & Company.

A discussion of where automated services are leading us was monitored by John Beecher, Director, Agriculture Library, University of Illinois.

The consensus of conference attendees pointed toward increased cooperative effort from the corporate information world, the academic information world, and the information sector of the Federal Government in solving agricultural and interdisciplinary-related problems.

Tours, emphasizing use of automated systems and library services, were made in the midst of a snowstorm to the Research Laboratories and Library of Ralston Purina Company, to the Monsanto Company Information Center where William A. Wilkinson, Head, acted as host, and to the Herbarium and Library of the Missouri Botanical Garden where James R. Reed, Director, acted as host.

The worst winter storm to hit St. Louis in a decade coincided with the meeting, cutting attendance and preventing two main speakers, Dr. Charles A. Black, Executive Vice-President, Council for Agricultural Science and Technology, and Dr. Richard Baldwin, Vice-President, Cargill, Inc., from arriving in time for their presentations. Both should receive medals for efforts, however; Dr. Black left Ames, Iowa, at 4:30 a.m. December 8 with about 60 pounds of hand-out material, and after many ill adventures, did not get back home until noon, December 9, not being able to land in St. Louis until long after his scheduled talk. Dr. Baldwin finally arrived in St. Louis long after his scheduled presentation, and had to return to Minneapolis, sharing his frustrations with Dr. Black who sat right across the aisle on the plane from St. Louis to Des Moines. 🌩️

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The library at the center is a small "one-person" operation established to serve the resource needs of the science staff. The collection is small but growing. Use is made of the ARS Current Awareness Literature Service (CALs) at present. Some on-line searches are performed for scientists by the University of Nebraska.



## FIRST INTERNATIONAL ON-LINE INFORMATION MEETING

by

Robyn C. Frank

Technical Information Specialist, Food and Nutrition Information and Educational  
Materials Center, National Agricultural Library, Beltsville, Md.

The 1st International On-Line Information Meeting, organized by *On-Line Review; the International Journal of On-Line Information Systems*, was held December 13-15, 1977, in London, England. Over three hundred persons (primarily Western Europeans) attended this conference which discussed the state-of-the-art and future trends in on-line information retrieval. This form of technology has been available to Europeans only in very recent years and some of their problems are unique to their situation.

The keynote speaker was Martha E. Williams, University of Illinois, who spoke on the current state of the "Information Age." She highlighted factors such as technological developments, availability of funds for research, and progress in information science research, that will determine its future.

Members of the European Economic Community (EEC) are anxiously awaiting the arrival and operation of the European on-line information network (EURONET) now set for the end of 1978. Nearly all major on-line services in the EEC will participate in the network. Initial access points or remote access facilities will be located in Frankfurt, London, Paris, Rome, Amsterdam, Brussels, Copenhagen, Dublin, and Luxembourg. It is expected that over 80 bibliographic data bases and some 30 fact data banks will be offered by these services. An annual growth rate of 50%-60% in on-line searching in Europe is anticipated. EURONET traffic aims are based on their securing 50%-60% of this volume. Presently 50%-70% of the on-line connect hours go to U.S. based services (Lockheed Information Systems and SDC Search Service). One major complaint of Western Europeans is the high telecommunications costs they have to pay when using U.S. based services. These costs are determined by the Post Office authority in many European countries. Consequently, U.S. companies will have tough competition in the Western European Market.

Marie-Christine Mallen of France presented an interesting paper on on-line operators' behavior and opinions. Based on a task analysis survey of professional operators, the efficiency of terminal users is dependent on man-machine interaction psychological factors. When moved from manual searching to a machine, the operator suddenly is dependent on his skills in using the terminal rather than on his manual searching for information. All operators felt that preparation is important but many had trouble dialoging on-line. This difficulty is mainly due to the high speed of the dialog in which the operators must read, analyze, decide, and act. An additional hindrance to many Europeans is the lack of manual typewriting and visual skills. (In many Western European Countries typewriting is far less widespread a custom than in the U.S. - especially within the postgraduate social strata.) Pressure to perform in a short time due to high costs places an additional burden on the operator. The author made suggestions for training materials and programs. She also recommended that system designers improve man-machine interface displays.

In addition to prepared papers on various aspects of on-line information retrieval, the Conference included several sessions on data base updates. Among them was a paper entitled "On-line Access to Human Nutrition Information" given by Robyn C. Frank, National Agricultural Library, featuring

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## AGRICULTURAL TRANSLATIONS



These items are available to USDA personnel upon a presentation of a loan request (AD-245) with the identification:  
TRANSLATION NO. . . . in the call number block. Non-USDA persons may request photoduplication at the rate of \$1 for each 10 pages or fraction thereof per citation. TRANSLATION NO. . . . MUST be on the request. Both types of requests should be sent to:

Lending Division  
National Agricultural Library  
U.S. Department of Agriculture  
Beltsville, Maryland 20705

ANDREICHUK, T.V. Vitamin Composition of Poultry Products. Translated from Russian: *Vestnik Selsko - Khozyaistvennoi Nauki*. 3: 128-132. 1975. TRANS. No. 22398.

BELIN, C. Official Control of the Belin FMD Vaccine. Translated from French: *Rev. Med. Vet.* 102: 17-24. 1951. TRANS. No. 22415.

BOISTEL, J. Functional Study of the Sensory Antennae of Hymenoptera. Translated from French: *Societe Biologie*, pp. 1623-1630. 1953. TRANS. No. 21892.

DEDIE, K. Preservation of FMD Virus in Hatched Chicks. Translated from German: *Archiv fuer Exper. Veter. Med.* 16: (6): 22-23. 1962. TRANS. No. 22409.

GIMENO, E.J. and SALCES, F. Economic Incidence of Foot-and-Mouth Disease in Argentina. Translated from Spanish: *Bull. Off. Int. Epiz.* 68: 549-553. 1967. TRANS. No. 22397.

GREBENNIKOV, E.P. et al. Trace Elements in Animal and Human Milks. Translated from Russian: *Voprosy Pitaniya*. 22 (1): 87-88. 1963. TRANS. No. 22417.

GROSS, K. Dependence of Gas Exchange of Young Spruce of the Water Potential of the Rooting Medium and on the Atmospheric Humidity at Different Atmospheric CO<sub>2</sub> Levels. Translated from German: *Forstwissenschaftliches Centralblatt*. 95 (4): 211-225. 1976. TRANS. No. 22394.

HOEHNE, H. The Influence of Tree Age on the Weight and Chemical Element Content of One to Four-Year Needles of Norway Spruce. Translated from German: *Arch. Forstwesen*. 13 (3): 247-265. 1964. TRANS. No. 22395.

KHAKIMOV, P.A. et al. Device for Studying Natural Fluorescence of Biological Objects. Translated from Russian: *Uzbekskii Biologicheskii Zhurnal. Tashkent*. 17 (1): 6-10. 1973. TRANS. No. 22168.

KOLENIKOVA, B.G. et al. Maintenance Microelements CU and MN in Cultivated Products of the Southern Ukraine. Translated from Russian: *Voprosy Pitaniya*. 30: 81-83. 1972. TRANS. No. 22169.

KRYLOVA, N.N. et al. Effect of Gamma Irradiation on Preservation of Thiamin in Pork Roasts. Translated from Russian: *Voprosy Pitaniya*. 32 (2): 83-84. 1973. TRANS. No. 22401.

MARTIN, W. and KELLER, Dr. T. The Influence of Polluted City Air on Vegetation. Translated from German: *Umwelthygiene & Berichte Eidgenossische Anstalt fur das Forstliche Versuchswesen*. 25 (10): 221-227. 1974. TRANS. No. 22453.

MANZYUK, V.T. and SHKUMAT, V.P. Methods for Evaluation of Barley Protein Quality and Their Use in Selection. Translated from Russian: *Vestnik Selskokhozyaistvennoi Nauki, Moscow*. 9: 84-87. 1975. TRANS. No. 22124.

MERZAMETOV, M.M. Buffalo Milk - A Valuable Food Product. Translated from Russian: *Voprosy Pitaniya*. 24 (4): 76-78. 1965. TRANS. No. 22451.

## NEW SERIALS RECEIVED AT NAL



*Climatic change.* Dordrecht, Holland; Boston. Reidel Pub. Co. v. 1, no. 1, March 1977 -- QC980.C55

*FNPN newsletter: food packaging and labeling.* Westport, Conn. Food & Nutrition Press. v. 1, no. 1, January 1977 -- TP374.F2

*FNPN newsletter: price trends of food ingredients.* Westport, Conn. Food & Nutrition Press. v. 1, no. 1, January 1977 -- HD9004.4.F2

*Farmstock.* Ebute-Metta, Nigeria. Alayande Pub. Co. January 1977 -- S347.F3

*Garden.* Bronx, N.Y. The Garden Society, New York Botanical Garden. v. 1, no. 1, March-April 1977 -- SB403.G3

*Irish journal of food science and technology.* Dublin, An Foras Taluntais. v. 1, no. 1, 1977 -- TP368.I7

*The Journal of equine medicine and surgery.* Princeton, N.J. Veterinary Pub. v. 1, no. 1, January 1977 -- SF951.J6

*Journal of food processing and preservation.* Westport, Conn. Food & Nutrition Press. v. 1, no. 1, January 1977 -- TX599.J6

*Journal of statistical planning and inference.* Amsterdam, North Holland. v. 1, no. 1, February 1977 -- HA1.J6

*Mazingira* (English ed.). Oxford, Pergamon Press. no. 1, 1977 -- HC79.E5M3

*On-line review.* Oxford; New York, Learned Information. v. 1, no. 1, March 1977 -- Z699.A105

*Toxicology letters.* Amsterdam, Elsevier - North Holland. v. 1, no. 1, July 1977 -- RA1190.T62

## NEW PUBLICATIONS OF NOTE



*Directory of Current Drought Research.* David R. Morton, Michael A. Greenstein, Anita Cochran. Boulder, Univ. of Colorado, 1977. 58 p. \$3.00.

Addendum to the *Directory of Current Drought Research.* 21 p. \$3.00.

*The Japanese Flowering Cherry Trees of Washington, D.C.* Roland M. Jefferson and Alan E. Fuson. Washington, D.C., Agricultural Research Service, U.S. Department of Agriculture, 1977. 66 p. (National Arboretum Contribution No. 4) Free. Available from Office of Government and Public Affairs, U.S.D.A., Washington, D.C. 20250.

*U.S. Directory of Environmental Resources.* 2nd ed. Washington, D.C., U.S. Environmental Agency, 1977. 749 p. (EPA-840-77-009) \$21.50 hard copy; \$3.00 microfiche copy. This directory includes 1,114 sources registered with the United States International Environmental Referral Center as of July 1, 1977; 68 contact points are listed for U.S. Dept. of Agriculture. Order no. is PB 274-110/AS. Order from: National Technical Information Center, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161.

*World Food and Nutrition Study: the Potential Contribution of Research.* Washington, D.C. The National Research Council, National Academy of Sciences, 1977. Volume 1--Crop productivity, animal productivity, aquatic food sources. Volume 2--Resources for agriculture, weather and climate. Volume 3--Food availability to consumers; rural institutions, policies, and social science research; information systems; interdependencies. Volume 4--Nutrition, new approaches to the alleviation of hunger. Volume 5--Agricultural research organization. Available from: Printing and Publishing Office, National Academy of Sciences, 2101 Constitution Avenue, N.W., Washington, D.C. 20418. \$6.75.







*Bibliography on Arthropoda and Air Pollution.*

C. John Hay. (U.S.D.A. Forest Service General Technical Report NE-34). 1977. 16 p. Free. Order from U.S.D.A. Forest Service, Northeastern Forest Experiment Station, 6816 Market Street, Upper Darby, Pennsylvania 19082. (NAL call no.: SD11.U56).

*Impact of Groundwater Development in Arid Lands: A Literature Review and Annotated Bibliography.*

Susan Jo Keith. 1977. 139 p. University of Arizona, Office of Arid Lands Studies, Arid Lands Resources Information Paper No. 10; 318 annotated references. \$10. Order from Publications, Office of Arid Land Studies, University of Arizona, Tucson, AZ 85721.

*Water Conservation for Domestic Users with Special Reference to Warm Desert Climates*, a short informative book prepared by the University of Arizona for the City of Tucson Department of Water and Sewers. 32 p. \$1.00. Order from City of Tucson Department of Water and Sewers, P.O. Box 27210, Tucson, AZ 85726, Att.: Mrs. Phyllis Stender.

*Women in American Agriculture, a select bibliography.* Prepared by the Economic Research Service and the National Agricultural Library, U.S.D.A. 1977. 30 p. (Library List 103) Free. Send self-addressed mailing label to NAL, Div. of Reference, Beltsville, MD. 20705.

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The following bibliographies (NAL call no.: Z690. A1C6) are published by the Council of Planning Librarians and may be ordered from:

Council of Planning Librarians  
P.O. Box 229  
Monticello, Illinois 61856

*Company Towns: A Bibliography of American and Foreign Sources.* Rosaline Levenson. Exchange Bibliography 1428. December 1977. 25 p. \$2.50.

*Petaluma, the California Growth Control Plan: A Bibliography.* Priscilla Graham. Exchange Bibliography 1429. December 1977. 11 p. \$1.50.

*A Selected Bibliography on Planning in Small Towns.* Clara Gellermann Miller. Exchange Bibliography 1425. December 1977. 12 p. \$1.50

*The Underground Gasification of Coal.* Jerry E. Green. Exchange Bibliography 1394. November 1977. 12 p. \$1.50

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Clearance has been granted to publish the following bibliographies:

*Deuteromycetes and Selected Ascomycetes That Occur on or in Wood: An Annotated Bibliography.* Compiled by Drs. Stewart and Palm, University of Minnesota, and Drs. Palmer and Eslyn, Forest Products Laboratory, USDA Forest Service, Madison, Wisconsin. For information contact: Max A. Davidson, Editor, Information Group, Forest Products Laboratory, USDA Forest Service, P.O. Box 5130, Madison, Wisconsin 53705.

*Effects of Environment on Livestock: A Bibliography.* Compiled by Donald G. Stevens, USDA Agricultural Research Service, Southern Region, College Station, Texas. For information contact: Donald G. Stevens, Agricultural Engineer, Transportation and Marketing Research Unit, USDA ARS, Southern Region, VTERL Building, F & B Road, P.O. Box ED, College Station, Texas 77840.

*Indexed Bibliography on Plant Responses to Salinity.* Compiled by the U.S. Salinity Laboratory, USDA Agricultural Research Service, Western Region, Riverside, California. For information contact: Eugene V. Maas, Supervisory Plant Physiologist, U.S. Salinity Laboratory, USDA ARS, Western Region, 4500 Glenwood Drive, Riverside, California 92501.

## QUICK BIBLIOGRAPHY SERIES

The bibliographies in this series are primarily computerized online or batch bibliographies emanating from searches performed by the NAL Reference Staff in response to customer requests.

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NAL -- BIBL. -- 77-21. *Urban Forestry*. 116 citations from AGRICOLA, ERIC, MEDLINE, NTIS, English only. Search by Charles N. Bebee.

NAL -- BIBL. -- 77-22. *Protein Extenders*. 187 citations from AGRICOLA, English only. Search by Charles N. Bebee.

NAL -- BIBL. -- 77-23. *Protecting Your Food: Sanitation for Consumers*. 87 citations from AGRICOLA, English only. Search by Charles N. Bebee.

NAL -- BIBL. -- 77-24. *Recent Family Cooking Publications From State Extension Services, 1968-76*. 46 citations from AGRICOLA. Spanish and English titles. Search by William H. Longenecker.

NAL -- BIBL. -- 77-25. *Dairy Industry of the U.S. and Canada, July 1968-April 1977*. 175 citations from AGRICOLA. English only. Search by Charles N. Bebee.

NAL -- BIBL. -- 77-26. *Herb Gardening, 1958-1977*. 81 citations from CAIN. English only. Search by Jayne MacLean.

## AGRICULTURE DATEBOOK



November 7, 1977-March 31, 1978: 4th

• *INTERNATIONAL EXHIBITION OF BOTANICAL ART & ILLUSTRATION 1977-1970*. Hunt Institute for Botanical Documentation, Penthouse, Hunt Library, Carnegie - Mellon University, Pittsburgh, PA. Hours: Monday-Friday, 9 a.m.-5 p.m.

March 13-15: *5th NORTH AMERICAN FOREST BIOLOGY WORKSHOP*. University of Florida, Gainesville. Contact: Dr. Charles A. Hollis, School of Forest Resources and Conservation, University of Florida, Gainesville, Florida 32611.

April 5-7: *31ST NATIONAL CONFERENCE ON RURAL HEALTH*. Denver, Colorado. For information, contact: Department of Rural Health, American Medical Association, 535 Dearborn Street, Chicago, Illinois 60610. (312) 751-6000.

July 24-27: *INTERNATIONAL SYMPOSIUM ON URBAN STORM WATER MANAGEMENT*. Contact: Dr. C.T. Hoan, Agricultural Engineering Department, University of Kentucky, Lexington, Kentucky 40506 (606) 258-2986.

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AGRICOLA which includes the bibliographic records of the Food and Nutrition Information and Educational Materials Center. A description of the data base and suggestions for accessing human nutrition information were given.

The contributed papers for this Meeting have been published and are available from Learned Information, 200 West 57th St., Suite 1210, New York, N.Y. 10019.

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